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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,077

04/12/2005

James A. Proctor JR.

080587

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23696 7590 07/01/2008
QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

SOBUTKA, PHILIP

ART UNIT

PAPER NUMBER

2618

NOTIFICATION DATE

DELIVERY MODE

07/01/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No. 10/531,077	Applicant(s) PROCTOR ET AL.	
	Examiner PHILIP J. SOBUTKA	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 13-17, 19, 28, 31-35, 37-39 and 44-47 is/are rejected.
- 7) ☒ Claim(s) 8-12, 18, 20-27, 29, 30, 36 and 40-43 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/31/06, 4/12/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. The drawings are objected to because, as required by 37 CFR 1.84 (I), which addresses character of lines, numbers, and letters in drawings:

All drawings must be made by a process which will give them satisfactory reproduction characteristics. Every line, number, and letter must be durable, clean, black (except for color drawings), sufficiently dense and dark, and uniformly thick and well-defined. The weight of all lines and letters must be heavy enough to permit adequate reproduction. This requirement applies to all lines however fine, to shading, and to lines representing cut surfaces in sectional views. Lines and strokes of different thicknesses may be used in the same drawing where different thicknesses have a different meaning.

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the lines and lettering in the figures are not “clean” and “uniformly thick and well-defined”. It appears as though a bad copy of the drawings may have been submitted with the application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to

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the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim contains all of the limitations of the instant claim. That is, the instant claim is anticipated by the patented claim.

6. Claims 13-17,19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935.

Although the conflicting claims are not identical, they are not patentably distinct from

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each other because the patent claim contains all of the limitations of the instant claim, except for a specific recitation of a transceiver and processor. Official Notice is taken that it is well known to construct repeaters using transceivers. Therefore it would have been obvious to one of ordinary skill in the art to modify the patent claim as shown in the instant claim in order to construct the repeater utilizing conventional components.

7. Claim 28 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim contains all of the limitations of the instant claim, except for a matched filter for IF and RF detection. Official Notice is taken that it is well known to construct repeaters using filters for IF and RF detection. Therefore it would have been obvious to one of ordinary skill in the art to modify the patent claim as shown in the instant claim in order to construct the repeater utilizing conventional components.

8. Claim 31 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim contains all of the limitations of the instant claim, except for the repeater being a non-regenerative repeater. Official Notice is taken that it is well known to construct repeaters as non-regenerative repeaters. Therefore it would have been obvious to one of ordinary skill in the art to modify the patent claim as shown in the instant claim in order to construct the repeater utilizing conventional components.

9. Claims 32-34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim contains all of the limitations of the instant claim, except for the transmit and receiver antennas being oppositely polarized directionally isolated antennas. Official Notice is taken that it is well known to construct repeaters as shown in the instant claims in order to provide maximum isolation between the signal and the repeated signal. Therefore it would have been obvious to one of ordinary skill in the art to modify the patent claim as shown in the instant claim in order to construct the repeater utilizing conventional components while providing maximum isolation between the signal and the repeated signal.

10. Claims 35, 37-39, 44-47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,230,935. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim contains all of the limitations of the instant claim, except for a specific recitation of a memory, processor and IEEE 802.11 compliant modem. Official Notice is taken that it is well known to construct repeaters using memory, processors, and IEEE 802.11 compliant modems. Therefore it would have been obvious to one of ordinary skill in the art to modify the patent claim as shown in the instant claim in order to construct the repeater utilizing conventional components.

Allowable Subject Matter

11. Claims 8-12,18,20-27,29,30,36,40-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 8. The nearest prior art as shown in Belcea fails to teach a method according to claim 1, wherein the configuring at least one of the first and second RF links includes configuring the frequency translating repeater change transmission power of at least one of the first or second frequency channels.

Consider claim 18. The nearest prior art as shown in Belcea fails to teach a frequency translating repeater according to claim 13, wherein the processor, in configuring at least one of the first and second RF links is further configured to configure the frequency translating repeater to translate a signal transmitted on one of the first and the second frequency channel to one of a third and the fourth frequency channel based on the message.

Consider claim 20. The nearest prior art as shown in Belcea fails to teach a frequency translating repeater according to claim 19, wherein the processor is further configured to: translate the detected signal: to the second frequency channel if the signal is detected on the first frequency channel of the first RF link for a time interval, to the first frequency channel if the signal is detected on the second frequency channel of the first RF link for the time interval, to the fourth frequency channel if the signal is detected on the third frequency channel of the second RF link for the time interval, and to the third frequency channel if the signal is detected on the fourth frequency channel of the second RF link for the time interval.

Consider claim 24. The nearest prior art as shown in Belcea fails to teach a frequency translating repeater of claim 13, further comprising an intermediate frequency (IF) unit configured to be capable of: down-converting a signal on the first RF link; and selecting one of the first and second frequency channels for connection to the transceiver.

Consider claim 27. The nearest prior art as shown in Belcea fails to teach a frequency translating repeater of claim 13, further comprising a diode detector coupled to the transceiver and the processor, the diode detector configured to detect at one of: an IF signal, and a baseband signal.

Consider claim 29. The nearest prior art as shown in Belcea fails to teach a frequency translating repeater of claim 19, further comprising a converter coupled to the transceiver and the processor, the converter configured to convert the signal to a digital signal and wherein the processor in detecting is further configured to: compare a power level associated with the signal power associated with the first and the second frequency channel; determine a noise estimate associated with the power level; compare the current signal power to this estimate as part of the detection process.

Consider claim 36. The nearest prior art as shown in Belcea fails to teach a non-regenerative frequency translating repeater according to claim 35, further comprising one or more of the following components: a low noise amplifier (LNA), a power amplifier (PA), an up converter, and a down converter, and wherein the modem further includes a client device and wherein the one or more of the components are

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shared between the non-regenerative frequency translating repeater and the client device.

Consider claim 40. The nearest prior art as shown in Belcea fails to teach a non-regenerative frequency translating repeater according to claim 35, further comprising a detector for detecting the signal and wherein the detector is shared between the non-regenerative frequency translating repeater and the modem.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached Monday through Friday from 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4711.

13. The central fax phone number for the Office is 571-273-8300.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number.

CENTRALIZED DELIVERY POLICY: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

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14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip J Sobutka/
Primary Examiner, Art Unit 2618

(571) 272-7887